Indiana Traffic Safety Facts 2003

Children

http://www.in.gov/cji

In the year 2003, the 1.3 million Indiana children under the age of 16 made up 21.9 percent of the state's population (6.1 million). Nationally, there were 64.9 million children under 16 in the United States, of which 2.0 percent resided in Indiana.[1]

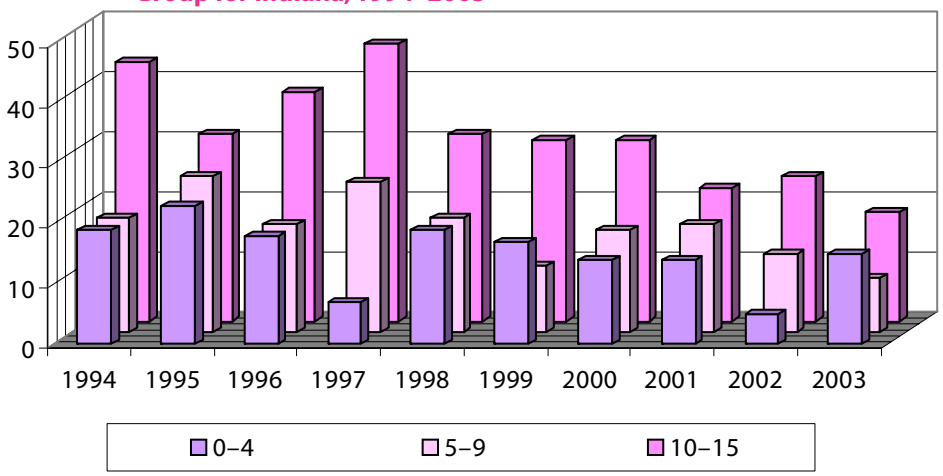
In 2003, there were 834 traffic-related fatalities in Indiana, and the under 16-year-old age group accounted for 5.0 percent (42) of those fatalities, just slightly below the national figure of 6.0 percent. Children under the age of 16 accounted for 4.3 percent (33) of all vehicle occupant fatalities in Indiana (764), compared to 5.3 percent in the U.S. One child died in an Indiana crash every 8 days in 2003.

The number of traffic fatalities among children 10–15 years of age has decreased 53 percent since 1994.

Males accounted for 66.7 percent (28 of 42) of child occupant and non-occupant fatalities (under the age of 16) in Indiana. In contrast, males in this age group accounted for 58.3 percent of the fatalities in the U.S. For children under the age of 16, 14-year-olds had the highest incidence rate of child fatalities, constituting 26.2 percent of all traffic fatalities below the age of 16.

As seen in Figure 1, the total number of traffic fatalities among children 10–15 years of age has decreased considerably (from 46 to 18) since 1997 and also has displayed a gradual reduction over the past 10 years. Among children 5–9 years of age, the annual number of Indiana traffic fatalities has decreased from 19 fatalities in 1994 to 9 in 2003. The number of fatalities among the 0–4 age group has made very little improvement over the past 10 years.

Figure 1: Total Traffic Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1994–2003



Blood alcohol content in drivers is negatively correlated with restraint use for children.

Child Endangerment

The National Center for Health Statistics for 2001 reports that motor vehicle crashes are the leading cause of death for children 2–14 years old in the U.S.[2] A study published in the *Journal of the American Medical Association* in 2000 indicated that nearly 24 percent of children 0–14 years old who died in motor vehicle crashes in the U.S. between 1985 and 1996 were killed in alcohol-related crashes. Of these deaths, 64.0 percent of the children were riding in a vehicle whose driver had been drinking at the time of the crash. Additionally, blood alcohol content in drivers is negatively correlated with restraint use for the children.[3] (As the drivers' level of intoxication increased, the level of restraint use for their child passengers decreased).

---

[1] Indiana's census by age for 2001 was derived using population growth estimates based on data available at http://factfinder.census.gov/ and http://quickfacts.census.gov/.

[2] National Center for Health Statistics (NCHS) Vital Statistics System. "National Mortality Data, 2001." Hyattsville (MD): NCHS 2004.

[3] Quinlan KP, Brewer RD, Sleet DA, Dellinger AM. "Characteristics of child passenger deaths and injuries involving drinking drivers." *JAMA* 2000; 283(17): 2249–52.

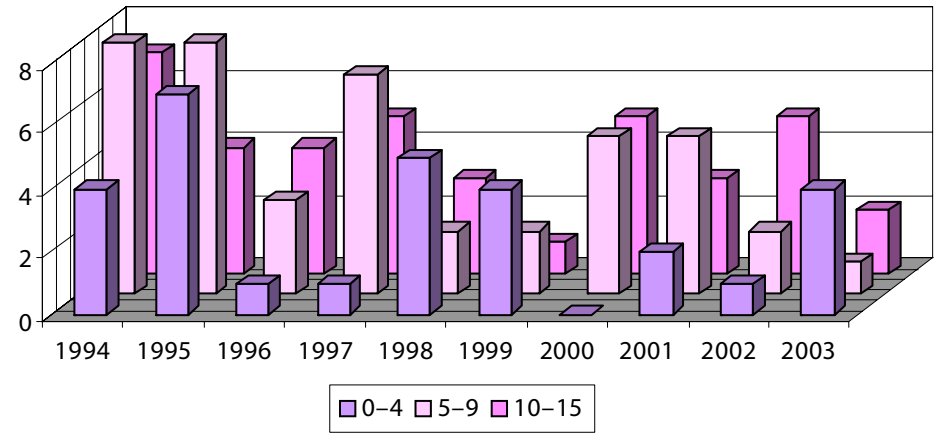
In 2003 in Indiana, there were 8 children killed in alcohol-related crashes,[4] representing 19.0 percent of all child fatalities for the year. Five of the killed children were passengers in a vehicle driven by a driver who was impaired at the time of the crash.

Of the 8 children killed in alcohol-related crashes during 2003, 5 were passengers in the same vehicle as the impaired driver.

Pedestrians

Nationally, there was a 45.1 percent decrease in pedestrian fatalities among the 0–15-year-old age group from 1994–2003. Indiana had a 53.3 percent decrease, as it went from 19 child pedestrian fatalities in 1994, to 7 child pedestrian fatalities in 2003. While the number of actual fatalities (by age group) vary widely from year to year, the general trend has been a favorable decline over the last 10 years. Two of the fatal crashes in 2003 (involving a child pedestrian fatality) occurred at an intersection, while all 7 fatalities occurred in urban areas.

Figure 2: Total Pedestrian Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1994–2003



Of the 62 pedestrian fatalities in Indiana for 2003, the 0–15 age group represented 11.3 percent (7) of those fatalities (5 male and 2 female).

Pedalcyclists

In 2003, all 7 of the pedalcyclists killed in Indiana motor vehicle crashes were male, and only 1 was below the age of 16. Nationally, 4 were below 5 years of age; 17 were below 7; and 51 were below 11. Nationally in 2003, children comprised 22.9 percent of the total pedalcyclist fatalities in motor vehicle crashes.

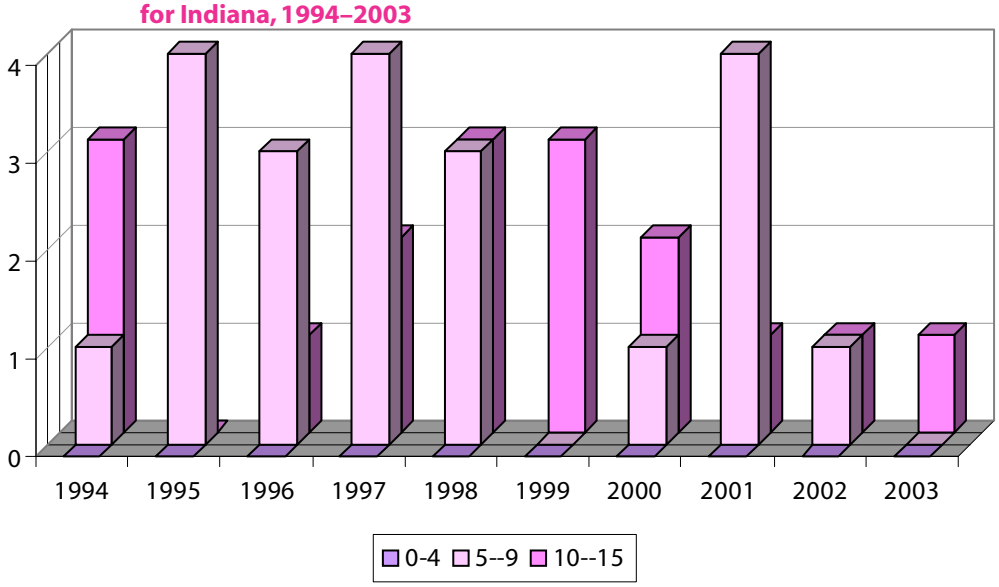
The 1 Indiana child motor vehicle-related pedalcycle fatality in 2003 was not wearing a helmet.

The number of child pedalcyclist fatalities in Indiana is considerably lower than the national figure and represents a decreasing trend, especially among children 5–9 years of age.

According to the Center for Disease Control (CDC), pedalcycle riders should wear a helmet every time they ride. However, despite the fact that helmets are 85 percent effective in reducing serious head injuries, only about 25 percent of children ages 5–14 wear them.[5] The 1 Indiana child motor vehicle-related pedalcycle fatality in 2003 was not wearing a helmet.

[4] An alcohol-related crash is defined as a vehicle crash involving at least 1 driver or non-occupant with a blood alcohol concentration (BAC) level of .01 gram per deciliter (g/dl) or higher.
[5] National Center for Disease Control "Preventing Bicycle-related Head Injuries." Available on the Internet at http://www.cdc.gov/ncipc/factsheets/bikehel.htm.

Figure 3: Total Pedalcyclist Fatalities Among Children 0–15 Years Old by Age Group for Indiana, 1994–2003



Of the 11 fatally injured children age 0–4, only 5 were properly restrained in a child safety seat.

Restraints

The National Highway Traffic Safety Administration (NHTSA) cites research stating that lap/shoulder belts, when used by front seat occupants (age 5 and older), reduce the risk of fatal injury by 45 percent in passenger cars, and 60 percent for light trucks.[6]

Table 1: Restraint Use by Passenger Vehicle Occupant Fatalities in Crashes by Age for Indiana, 2003

	Age Group (Years)					
Restraint Use	**0–4**	**5–9**	**10–15**	**16–20**	**21+**	**Total**
Proper	5	3	7	49	250	314
Not Proper	3	3	6	69	294	375
Unknown	3	1	2	10	58	74

During 2003 in Indiana, there were 134 passengers under the age of 16 in fatal passenger vehicle crashes. Where the restraint use was known for these crashes, 35.8 percent (44 of 123) were not properly restrained. Of the 22 (of 28) passenger fatalities younger than 16 years old in passenger vehicles whose restraint was known, 45.5 percent (10) of them were not properly restrained, compared to an estimated 55.8 percent totally unrestrained in the nation. Only 1 of the 2 fatally injured children who were occupants in a pickup truck was restrained. Of the 11 fatally injured children age 0–4, only 5 were properly restrained in a child safety seat. Five of the fatally injured children, riding in the front seat of passenger cars, were wearing only a lap and shoulder belt and two were completely unrestrained.

Table 2: Children Under 5 Years Old Fatally Injured in Passenger Vehicle Crashes by Age Group and Type of Restraint for Indiana, 2003*

Type of Restraint	Infants (Under Age 1)	Toddlers (Age 1–4)	Total
None Used	0	1	1
Child Seat	1	6	7
Adult Seat Belt	0	0	0
Unknown	0	3	3

*Excludes 4 pedestrians.

NHTSA reports that child safety seats are found to reduce fatal injury by 71 percent for children under 1 year old, and 54 percent for children 1–4 years old in passenger cars. The corresponding figures for light trucks are 58 percent and 59 percent, respectively. In Indiana in

[6] Restraint safety information taken from the National Highway Traffic Safety Administration's "Traffic Safety Facts 2000, Children." This document is available online at http://www.nhtsa.dot.gov.

72.6 percent of the child restraints inspected were improperly used.

2003, there were 11 passenger vehicle occupant fatalities under the age of 5 (see Table 2). Of the 8 fatalities whose restraint status was known, 1 child was unrestrained, 2 improperly restrained in child seats, and 5 children were fatally injured as a passenger using a child safety seat.

NHTSA reports that between 1975 and 2003, 7,020 lives were saved by the use of child restraints. However, based on a 2002 study of child seat misuse in six states, 72.6 percent of the child restraints inspected had one or more critical errors per restraint. Rear-facing child safety seats, used for newborns and infants, had 83.9 percent overall incorrect use, while forward-facing child safety seats were at 81.9 percent incorrect use.

The most frequent problems in these seats were listed as follows: failure of the harness straps to snugly restrain the child, failure of the safety belt to tightly lock the seat in the vehicle, improper positioning of the harness retainer clip for the rear-facing seats and incorrect use of a top tether strap for forward facing seats.[7]

Conclusion

The death of a child as a result of a traffic crash is not only a tragic loss of life, it is also a traumatic and unnecessary event when that death is caused by an irresponsible driver. Indiana has made the greatest progress in reducing child fatalities in the 10–15-year-old age category over the last 10 years. However, minimal progress has been made in reducing the number of child fatalities in the 0–4- and 5–9-year-old age groups. Overall, both Indiana and national figures for child pedestrian fatalities are decreasing at similar rates.

The rate of child passenger fatalities in vehicles driven by drivers who had consumed alcohol is lower in Indiana than the rest of the nation.

Indiana has a lower percentage of child traffic fatalities involving alcohol (19.0 percent) than the national average for 2003 (21.0 percent). However, the rate of child passenger fatalities in vehicles driven by drivers who had consumed alcohol is greater in Indiana than the rest of the nation. Drunk drivers contributed to the death of at least 8 children in Indiana, 5 of which were occupants in the drinking driver's vehicle. While drunk driving remains a crucial threat to Indiana children's safety, increased law enforcement and driver education concerning proper safety restraint use may be the most effective way to improve child passenger safety.[8]

While the state of Indiana is proactive in encouraging drivers to buckle their child passengers, the maximum penalty remains at $25 for a child restraint violation, and/or the possibility of having 4 points added to the violator's driver's license. Indiana continues to see fatalities due to the lack of use and the lack of proper use of seat belts and child seats. The pickup truck seat belt exemption currently in place in Indiana can be considered the contributing factor for up to 2 of the child fatalities that occurred in 2003 (1 child was unrestrained at the time of the crash). During the 2003–2004 Indiana Legislative Session, state lawmakers passed a child restraint enhancement bill that requires all children to be properly restrained in a child restraint system meeting FMVSS 213 until 8 years of age. Further, all children between the ages of 8 and 16 riding in a motor vehicle must be in a child restraint or seat belt, including pickup trucks and vehicles plated as pickup trucks. Although the new child restraint law does not go into effect until July 1, 2005, child safety advocates are making every effort to educate parents and caregivers on the safety aspects associated with using booster seats now, instead of delaying properly restraining their children until they face the possibility of legal consequences for not placing their children in booster seats in the future.

[7] This information was compiled from "Misuse of Child Restraints." The May 2003 report is available online at http://www.nhtsa.dot.gov.

[8] Child safety laws and regulations for each state are also available at http://www.safekids.org.

This publication was prepared on behalf of the Indiana Criminal Justice Institute by Purdue University's Center for the Advancement of Transportation Safety. All information contained within was gathered from the Fatality Analysis Reporting System (FARS) Web-Based Encyclopedia provided by the National Highway Traffic Safety Administration (NHTSA) available at http://www.fars.nhtsa.dot.gov. Results for 1994–2001 are based upon FARS data as of September 2002; results for 2002 are as of April 2004; and results for 2003 are as of August 20, 2004. Please direct any questions concerning data in this document to the Center for the Advancement of Transportation Safety, Purdue University, 1291F Cumberland Ave., West Lafayette, IN, 47906-1385, (765) 494-7038.